

WHAT IS CLAIMED IS:

1. A radio communication system comprising:
a plurality of wireless networks, each wireless network comprising a plurality of radio communication apparatuses and a control station allocating a resource to each radio communication apparatus,

wherein, upon detection of interference between networks, a buffer frame period that is different from a normal transmission frame period is set in one of the networks so as to adjust a positional relationship of frame periods used by the networks.

2. A radio communication apparatus operating as a control station in a radio communication environment wherein a plurality of wireless networks operating under the control of a control station coexist, comprising:

beacon transmitting means for setting a transmission frame period of a local network and transmitting beacon information regarding resource allocation at a predetermined position of the transmission frame period;

an interference detecting means for detecting whether the local network interferes with another network; and

buffer frame period setting means for setting a buffer frame period having a different frame period to change the

position of a transmission frame period upon detection of interference between networks.

3. The radio communication apparatus according to Claim 2, wherein the interference detecting means detects interference of beacon information on the basis of parameters obtained by receiving beacon information transmitted from another network.

4. The radio communication apparatus according to Claim 2, wherein

the transmission frame period includes a contention free period wherein data communication is effected on the basis of range reservation/allocation, and

the interference detecting means detects whether contention free periods are synchronized between networks on the basis of parameters obtained by receiving beacon information transmitted from another network.

5. The radio communication apparatus according to Claim 4, wherein the buffer frame setting means sets a buffer frame period that is shorter than a normal transmission frame period so as to ease the interference of contention free period between networks.

6. The radio communication apparatus according to Claim 2, wherein the interference detecting means detects interference between networks on the basis of information from a radio communication apparatus in the local network.

7. The radio communication apparatus according to Claim 2, wherein the buffer frame setting means sets a buffer frame period that is shorter than a normal transmission frame period so as to ease collision of transmission positions of beacon information between networks.

8. A radio communication method for a control station to operate in a radio communication environment wherein a plurality of wireless networks operating under control of the control station coexists, the method comprising:

a beacon transmission step for setting a transmission frame period of a local network and transmitting beacon information regarding resource allocation at a predetermined position of the transmission frame period;

an interference detection step for detecting whether the local network interferes with another network; and

a buffer frame period setting step for setting a buffer frame period having a different frame period to change the position of a transmission frame period upon detection of

interference between networks.

9. The radio communication method according to Claim 8, wherein the interference detection step detects interference of beacon information on the basis of parameters obtained by receiving beacon information transmitted from another network.

10. The radio communication method according to Claim 8, wherein

the transmission frame period includes a contention free period wherein data communication is effected on the basis of range reservation/allocation, and

the interference detection step detects whether contention free periods are synchronized between networks on the basis of parameters obtained by receiving beacon information transmitted from another network.

11. The radio communication method according to Claim 10, wherein the buffer frame setting step sets a buffer frame period that is shorter than a normal transmission frame period so as to ease the interference of contention free periods between networks.

12. The radio communication method according to Claim

8, wherein the interference detection step detects interference between networks on the basis of information from a radio communication apparatus in the local network.

13. The radio communication method according to Claim 12, wherein the buffer frame setting step sets a buffer frame period that is shorter than a normal transmission frame period so as to ease collision of transmission positions of beacon information between networks.

14. A radio communication apparatus operating in a particular wireless network in a radio communication environment wherein a plurality of wireless networks operating under control of a control station coexists, comprising:

beacon information receiving means for receiving beacon information from a control station of a local network in a predetermined beacon information receiving range;

beacon information detecting means for detecting beacon information from a control station of another network;

collision detecting means for detecting whether beacon information of the local network collides with beacon information of another network; and

interference informing means for notifying a control station of the local network of a beacon information

collision detection result.

15. A radio communication apparatus according to Claim 14, wherein the beacon information detecting means sets a redundant time for a beacon information receiving range to detect beacon information from a control station of another network.

16. A radio communication apparatus according to Claim 14, wherein the interference informing means for reporting a beacon information collision detection result by using a management time slot allocated to a control station of the local network.

17. A radio communication method carried out in a particular wireless network in a radio communication environment wherein a plurality of wireless networks operating under control of a control station coexists, comprising:

a beacon information receiving step for receiving beacon information from a control station of a local network in a predetermined beacon information receiving range;

a beacon information detection step for detecting beacon information from a control station of another network;

a collision detection step for detecting whether beacon information of the local network collides with beacon information of another network; and

an interference informing step for notifying a control station of the local network of a beacon information collision detection result.

18. A radio communication method according to Claim 17, wherein the beacon information detection step sets a redundant time for a beacon information receiving range to detect beacon information from a control station of another network.

19. A radio communication method according to Claim 17, wherein the interference informing step for reporting a beacon information collision detection result by using a management time slot allocated to a control station of the local network.

20. A computer program described in a computer-readable format so as to carry out, on a computer system, processing for a control station to operate in a radio communication environment wherein a plurality of wireless networks operating under the control of a control station coexist, comprising:

a beacon transmitting step for setting a transmission frame period of a local network and transmitting beacon information regarding resource allocation at a predetermined position of the transmission frame period;

an interference detection step for detecting whether the local network interferes with another network; and

a buffer frame period setting step for setting a buffer frame period having a different frame period to change the position of a transmission frame period upon detection of interference between networks.

21. A computer program described in a computer-readable format so as to carry out, on a computer system, processing for an operation in a particular wireless network in a radio communication environment wherein a plurality of wireless networks operating under the control of a control station coexist, comprising:

a beacon information receiving step for receiving beacon information from a control station of a local network in a predetermined beacon information receiving range;

a beacon information detection step for detecting beacon information from a control station of another network;

a collision detection step for detecting whether beacon information of the local network collides with beacon

information of another network; and

an interference informing step for notifying a control station of the local network of a beacon information collision detection result.